National Differences in Academic Performance at USP

A Discussion Paper for Senate

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Introduction

Given the regional character of students at USP, it is to be expected that there will be discussion of the differences in academic results for different national groups. It is of concern, however, that at times there have been allegations that the differences in grades of groups of students may be due to the nationality of lecturers, rather than differences in students' academic performance. Such allegations cannot but be damaging to the University's reputation.

It is important, therefore, that the University community has a full understanding and discussion of the actual patterns of student performance at the University. Where systematic differences in performance are significant, the University needs to investigate whether these differences cannot be explained by some reliable indicators of students' abilities, the usual explanation for differences in academic performance.

This is a preliminary study which examines academic performances in aggregate for all the countries, and in selected subject areas, in order to obtain a broad understanding of the nature of the problems.

The initial findings indicate that there are significant differences in academic performances by nationality. What seems clear is that the differences are to be found across a range of subject areas, and would not seem to indicate any national bias by lecturers.

The evidence of the relative under-performance by countries is of concern to the University, and will no doubt also be to the countries themselves.

More importantly, the data presented here indicates that some of the national differences are likely to be explained by differences in the quality of students (as indicated by performance in secondary school examinations at seventh form and/or Foundation level) coming into USP. In so far as the data indicates that member countries are not sending their best students to USP, this has to be an area of major concern for the University.

The preliminary findings in this paper indicates that there is an urgent need for the University to be systematically and continuously monitoring academic performances of students at USP, as well as the quality of the intakes. This will help the University to identify academic difficulties faced by different national groups, provide valuable indicators if the quality of the intake is being serious impaired, and enable Regional Member Governments to become aware of the effects of their selection policies for study at USP and act accordingly.

SECTION A NATIONAL DIFFERENCES IN ACADEMIC PERFORMANCE

The 1994 Results for EC102

Interest in this study arose from an initial examination of EC102 results for 1994, at a time when there had been various allegations by some students of ethnic and/or national biases by lecturers.[1] The data was amenable to analysis of national differences and the results, in aggregate, were somewhat unexpected.

Table 1 indicates the unusual result that none of the students from regional member countries other than Fiji, had grades of B or above. In particular, more than 80% of all Kiribati and Vanuatu students failed.[2]

Table 1 EC102 1994 Performance (perc. & and nos)

	Percentages with Grades						Nos.
	A	B	C	D	E	ALL	
Fiji	3	11	67	5	15	100	304
Kiribati			20		80	100	5
Solomon			71	14	14	100	7
Tonga			80		20	100	5
Tuvalu			75		25	100	4
Vanuatu			13		88	100	8
W.Samoa			83		17	100	6
ALL	3	9	66	5	18	100	349

Given the possibility that the numbers of students from countries other than Fiji were quite small and not susceptible to statistical generalisations, it seemed important to investigate whether such differences might be present in large samples and other subject areas at USP, and over time.

Differences in All Subject Areas (1990-94)

At the most aggregate level, all results from 1990 to 1994 (Semester I and Semester II) were analysed for all courses taught at the Laucala Campus, by national origin of students.[3]

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[1] The author taught the EC102 course for the first semester 1994, although the bulk of the assessment, including the grading of the students, was conducted by a mixture of regional and expatriate staff, who would not have been expected to have any particular bias in assessing students' academic performance.

[2] I am grateful to Parbendra Singh (Computer Centre) who supplied the raw data.

[3] Extension results were excluded so as to not introduce possible differences in academic performance between campus and distance education study as a complicating factor.

It should firstly be noted from Table 1 that the number of units being analysed are large for all countries (other than Marshalls, Niue, Nauru and Tokelau in the later years) and hence statistical generalisations are possible (except for these countries in the later years).

Secondly, Table 2 indicates that for several countries, there has been a strong trend of declining campus enrolments: Cook Islands, Kiribati, and Tonga.[4] W.Samoa's decline was reversed in 1994. While it would be important to take Extension enrolments into account as well, the reduction of USP campus enrolments from some countries, in the context of probably increasing numbers of their students studying abroad in metropolitan universities, has to be a matter of concern to the University.

Table 2 Number of Units Undertaken at Laucala (by Countries)

	1990	1991	1992	1993	1994
Cook Islands	133	114	63	87	90
Fiji	11598	11462	8862	10170	12275
Kiribati	301	317	303	195	227
Marshall Islands	18	33	49	21	9
Nauru	32	13	9	10	5
Niue	20	2	1		
Other	450	366	305	348	323
Solomon Islands	870	763	912	752	890
Tokelau	29	32	43	9	14
Tonga	575	607	546	448	400
Tuvalu	67	85	115	84	145
Vanuatu	350	208	243	184	206
Western Samoa	406	439	322	332	434
All Countries	14849	14441	11773	12640	15018

Academic grades B and above, are usually taken as indicators of excellence.[5] Table 1 (Appendix) indicates the percentages of students obtaining an A or A+ grade in all the units enrolled in, for these five years for all the countries represented at USP.[6] While the USP-wide average for the five years is 8 percent (strongly influenced by the same percentage for Fiji), the percentages for the other

[4]It should be noted that there is a downward dip in 1992 for all countries, attributable to the ending of the Foundation Social Science courses on campus. Vanuatu's decline is more apparent than real, since this has been more than compensated by enrolments on the Vila complex.

[5]Although it has also been pointed out in another paper by the author, that this is not necessarily true for some courses and departments, where these higher grades are extremely generously awarded.

[6]The total number of units sat by students from the different countries is given in Table 1, Appendix 1

countries are significantly lower: Kiribati, Nauru, Niue, Tokelau and Tuvalu all with 2 percent or less. The percentage for Solomons indicates a steady and gradual decline over the last five years of A grade performances at USP.

In case it might be thought that the small numbers of units being undertaken for some countries might statistically lead to an absence of A-grades in the results, it should be noted that similar patterns are indicated by Table 3 which gives the percentages of students with at least a B-grade. Western Samoa is an exception, with the data indicating a gradual improvement between 1990 and 1994, with the 1994 percentage being higher than the average for all countries. This will be commented on, below.

Table 3 Percentages Obtaining at Least a B-Grade (all subjects)

	1990	1991	1992	1993	1994
All Countries	33	32	30	30	35
Cook Islands	33	38	32	26	36
Fiji	34	33	31	31	36
Kiribati	15	19	18	16	19
Marshall Islands	28	36	8	19	0
Nauru	6	8	11	20	40
Niue	10	50	0		
Solomon Islands	35	33	35	26	26
Tokelau	3	13	21	11	14
Tonga	32	25	25	22	30
Tuvalu	21	20	12	17	29
Vanuatu	29	27	20	24	29
Western Samoa	25	26	30	33	38
Other	44	48	43	48	39

Overall, however, there seems to be clear indication that relative to the academic performance of students from Fiji, the performance of students from other member countries is somewhat lacking at the higher grade levels.

For students (and those funding them) probably the most important criterion of success in study is whether they pass or fail a unit, since ultimately this determines the numbers of graduates eventually coming out in this area. Table 4 gives the national average percentages of students passing in all the subject areas. While the percentage passing for all countries has been gradually rising from 72 percent in 1990 to 79 percent in 1994[7], the percentages for several countries has been disappointingly low: for Kiribati, rising from the mid-sixties to just over 70 percent; for Solomon Islands generally falling to 71 percent; Tokelau declining to 33 percent before rising to 50%; Tuvalu falling to 50% in 1992 then rising to 74%; and Vanuatu similarly declining and then rising.

As with their proportion of B grade or better students, Western Samoa also had a steadily rising percentage of students passing, achieving a better rate than

[7]This unusual phenomenon is discussed in another paper by the author.

the all-country average in 1994.

The one indicator of the overall academic performance of all students in all subject areas for each country at all grade levels, is given by the national Grade Point Averages given in Table 2 (Appendix). While the University-wide average was 2.2, the figures for countries other than Fiji reinforce the conclusions made above, on the relatively inferior average academic performance of students from Kiribati, Nauru, Niue, Tokelau, Tuvalu, and to a lesser extent, Tonga, Vanuatu and Western Samoa, taken over the 1990-94 period.

Table 4 Percentages Passing All Subjects (1990-94)

	1990	1991	1992	1993	1994
All Countries	72	74	77	77	79
Cook Islands	77	75	83	75	83
Fiji	72	74	78	78	80
Kiribati	65	65	66	71	71
Marshall Islands	100	85	51	43	0
Nauru	44	69	89	80	80
Niue	45	50	100		
Solomon Islands	76	77	80	74	71
Tokelau	52	59	65	33	50
Tonga	78	73	72	76	78
Tuvalu	69	51	50	74	74
Vanuatu	76	71	71	75	75
Western Samoa	67	64	77	80	82
Other	77	75	80	76	72

The above results cover all subject areas of study at USP, some of which are generous in their award of good grades and some relatively tougher.

It is of further concern, therefore, that the national differences are as, if not more significant in key subject areas which are generally acknowledged to be important for the labour markets of the USP member countries.

Differences in Key Subject Areas

Four key subject areas were selected for further analysis: Mathematics, Chemistry, Accounting and Financial Management, and Education. These are subject areas which recent studies have identified as crucial for countries' economic development strategies.[8]

Firstly, Tables 3, 6, 10, and 15 (Appendix) indicate that for several countries, there has been a significant decline in the campus enrolment in these key areas, even if the 1992 dip in total enrolments is taken into account.

[8]See Narsey and Morris (1992) Pacific Regional Post Secondary Education Study, for Fiji, Solomons, Vanuatu, Kiribati, W.Samoa and Tonga.

In Mathematics, significant decreases in enrolment were recorded for Cook Islands (down from 14 in 1990 to 3 in 1994), Kiribati (29 to 8), Solomon Islands (123 to 93), Tonga (74 to 26), Vanuatu (38 to 5) and Western Samoa (from 57 in 1991 to 24 in 1994). The trends are similar for Chemistry, Accounting and Financial Management, and Education.

While a more definitive statement will need to take extension enrolments also into account, the above trend of declining campus enrolments in these key subject areas (and corresponding to similar trends for some countries in all subject areas), is a pointer to an area of concern to the University. It may also be of concern for the relevant countries if their reduction in enrolment in these subject areas at USP are not counter-balanced by increases in institutions abroad.

More importantly, the differences in national academic performances in the key subject areas are of major concern. The patterns visible for quality performance (as indicated by percentages with at least an A grade or at least a B grade), are discussed below for the key subject areas.

Table 4 (Appendix) indicates that for Mathematics, while the University average for at least an A Grade declined from around 6% to about 4% between 1990 and 1994 (and this in itself has to be of some concern to USP),[9] for most countries, the figure has been closer to 0.

While it might be argued that reliable conclusions cannot be drawn from this table because of the small numbers involved for some countries, Table 5 below indicates even stronger trends when the percentages with at least a B grade are taken into account. There is again an overall decline in the University wide average from 21 percent in 1990 to 13 percent in 1993, rising slightly to 17 percent in 1994. Solomons, Tonga, Tuvalu and Vanuatu indicate a general decline from the first half of this period to the second half. While figures for Kiribati and Western Samoa indicate a decline followed by a slight improvement in 1994, the levels in the last year are still way below the University average.

At the most basic level, the percentages of those passing Mathematics units are given by Table 6. While the average for all countries has been just around 50%, the percentages have been considerably lower for countries other than Fiji. Vanuatu has seen its percentage passing decline from 47 percent in 1990 to 20 percent in 1994; Tonga from 55 percent to 20 percent in the same period; Tuvalu dropping to 14 percent in 1994; and most of the other countries showing significant fluctuation around fairly low percentage pass rates.

[9] Given the nature of this discipline it could be well argued that there is less scope for discretionary adjustment (consciously or sub-consciously) of grades, by course assessors and departments.

Table 5 Percentage with At Least a B Grade in Mathematics

	1990	1991	1992	1993	1994
All Countries	21	20	14	13	17
Cook Islands	7	0	0	20	0
Fiji	23	21	15	15	18
Kiribati	10	3	3	0	13
Marshall Islands		0	0	0	0
Nauru	0				
Niue	0				
Other	27	40	23	23	38
Solomon Islands	11	12	18	2	3
Tokelau	0	0	0	0	
Tonga	18	13	11	8	4
Tuvalu	13	17	0	0	0
Vanuatu	8	5	10	0	0
Western Samoa	8	7	4	0	4

Table 6 Percentage Passing in Mathematics (1990-94)

	1990	1991	1992	1993	1994
All Countries	49	52	49	48	53
Cook Islands	36	20	33	40	0
Fiji	50	55	52	50	56
Kiribati	41	22	33	40	38
Marshall Islands		0	50	0	0
Nauru	0				
Niue	0				
Other	57	66	65	58	71
Solomon Islands	41	47	46	29	43
Tokelau	20	0	17	0	
Tonga	55	42	45	62	23
Tuvalu	25	17	25	50	14
Vanuatu	47	30	24	24	20
Western Samoa	44	33	29	33	42

Table 7 indicates that the trends evident for Accounting and Financial Management are similar to those indicated above for Mathematics. Significant deterioration in pass rates in Accounting and Financial Management is recorded for Kiribati, Solomons, Tonga and Vanuatu. Western Samoa again stands out in showing improvement over this period. Tables 7 and 8 (Appendix), which give the proportions with at least an A Grade, and with at least a B Grade, indicate similar patterns in the levels and trends in the proportion of better quality performances in Accounting and Financial Management.

Table 7 Percentages Passing Accounting & FM (by countries)

	1990	1991	1992	1993	1994
All Countries	71	77	75	74	68
Cook Islands	68	57	38	38	83
Fiji	72	79	76	76	69
Kiribati	37	54	53	58	33
Marshall Islands			0		
Nauru	25	100		50	
Other	60	44	71	46	59
Solomon Islands	74	77	79	39	38
Tokelau		0	50		
Tonga	73	74	68	47	56
Tuvalu	67	25	50	100	88
Vanuatu	67	63	80	33	18
Western Samoa	54	54	50	73	75

For Chemistry (Tables 11-14, Appendix), the patterns are not as clear, largely because of the large increases in the All Country averages of percentage passing and percentage obtaining at least a B Grade. Similarly, the 1990-94 averages (as a point of comparison) would also be misleading because of significant changes in enrolments over the years and the changing USP average. Nevertheless, the country differences from the trend line would still indicate similar conclusions.

Similarly, comparisons of national performances in Education (see Tables 14-18, Appendix) are difficult because the pass rates are uniformly high and do not discriminate adequately between average and genuinely better performances.[10]

Nevertheless, the data in the tables presented in the Appendix, present an overall picture which is not significantly different from that outlined in the sections above. The academic performances of the students of most countries other than Fiji, have been below the University average. For nearly all of them (except Western Samoa) the performances would seem to be relatively worsening over time.

The above should not be taken to imply that standards of Fiji students are at desirable levels (and indeed the evidence below on the quality of intake from Fiji would indicate that this cannot be assumed). The analysis above simply compares each country's performance relative to the University average, which, because of the relative numbers of students, inevitably tends towards the Fiji average. By absolute criteria, Fiji standards may themselves be changing.

[10]The difficulties outlined in these two paragraphs are illustrative of the weaknesses created in overall assessment, if departments and the University do not maintain consistency in standards of assessment, across departments, and over time. This issue is discussed in another paper by the author.

The significant relative underperformance at the upper grade levels by students of these countries must be of concern to both the University and the countries themselves. Are the students under-performing relative to their abilities as well, or are the actual abilities of the students deficient to start off with? This will be investigated in a section below.

SECTION B THE QUALITY OF NATIONAL INTAKES INTO USP

Isolating the specific factors which could possibly explain the differences in performance is extremely difficult given that the groups of students are not necessarily comparable. Students come from a variety of countries with different school systems and curricula, and different sets of secondary school examinations which are not statistically comparable. The one exception is the PSSC examinations and assessment systems, co-ordinated by the SPBEA, and used here in assessing the quality of student intakes from some countries.

Even then, significant proportions of USP students are not immediate school leavers. While "starting abilities" for school leavers may be indicated by their performance in PSSC, Fiji Form 7 Examinations or USP Foundation, most students would have done these examinations in different years, and without standardisation of assessment across years, statistical analysis would be weakened. In any case, for many students, entry is effected as "mature entry", not requiring academic performance at lower levels.

For Fiji students, a compounding feature is that scholarships are relatively freely available from Government and the Fijian Affairs Board for indigenous Fijian students with significantly lower marks than others, while large proportions of better students in general are probably being awarded scholarships overseas. The Fiji distribution of students is therefore likely to be comprised of two significantly different distributions, with different means and spreads, since a greater proportion of Fijian students will be drawn from the lower mark ranges of secondary examinations.

It is also probably the case that academically better students (of all groups) are likely to be studying privately overseas, for sought-after courses not available at USP, such as in engineering, medicine, architecture and specialised sciences. This may also be expected to lead to a systematic downward bias (of an unknown nature) in the quality of students at USP, as is indicated by the evidence presented in the next two sections.

Intake from PSSC Graduates

Data gathered within the Planning and Development Office, indicates that for countries other than Fiji, large proportions of their best students are not reaching USP. For some countries, the data indicates a severe loss at the upper grade levels.

Analysis of the results of the Sixth Form PSSC examinations results for the five larger countries (excluding Fiji) over the period 1990 to 1992 reveals that in aggregate, a mere 13% of the 1990 top tier of PSSC graduates (represented

by Grades 4-7) were actually at USP in 1994, although this is an improvement from the even lower 6% of the 1990 PSSC graduates (Table 8).[11]

Table 8 Perc. of PSSC Graduates at USP in 1994 (by grade)

	1990	1991	1992
Kiribati	6	8	0
Gr 4-7	0	0	0
Gr 8-11	0	25	0
Gr 12-15	8	0	0
Solomon Is	18	19	20
Gr 4-7	22	21	24
Gr 8-11	22	13	26
Gr 12-15	17	6	17
Tonga	7	1	1
Gr 4-7	6	3	6
Gr 8-11	17	3	2
Gr 12-15	4	0	0
Vanuatu			23
Gr 4-7			0
Gr 8-11			0
Gr 12-15			36
W.Samoa	3	11	20
Gr 4-7	0	7	14
Gr 8-11	0	8	16
Gr 12-15	5	3	24
Five Countries			
Gr 4-7	6	8	13
Gr 8-11	13	8	12
Gr 12-15	7	4	10

Source: Data collated in the Planning and Development Office.

The aggregate for the five countries is moreover inflated by the 20% indicated for Solomon Islands: most other countries had even less, with 6% for Tonga and zero percent for Vanuatu and Kiribati.

[11]The year to year comparisons should be made with caution since there would be some systematic differences between the proportions of 1990, 1991 and 1992 cohorts present in the one year, 1994.

For Western Samoa, while the percentage of students from the two top tiers of grades is still low, it is the only country for which the data indicates a significant improvement in the proportion of better students coming to USP. This may be related to the overall improvement in academic performance of Western Samoan students at USP over 1990-1994, indicated in previous sections.

Quality of Intake from Fiji

An indication of the quality of Fiji students at USP may be obtained by examining the proportions of students passing Form 7 and USP Foundation courses, and eventually enrolled at USP in the post-Foundation programmes.[12] This was done for the 1991 cohort, differentiating between the two major ethnic groups from Fiji, because there seem to be significant differences in both the quality of intakes of the two groups, as well as their academic performance.

Table 20 (Appendix) indicates first of all the gross ethnic imbalance in the numbers of students passing Form 7 (with at least 200 marks) or doing USP Foundation, with more than twice as many Indo-Fijian students as Fijian, actually qualifying.

The lower numbers of Fijian students is also accompanied by an extreme paucity of Fijian students at the top end of the grading scales, with a mere 2 students obtaining a minimum average of B+ in USP Foundation or 300 marks in the Form 7 Examination, and 20 students with a minimum of B or 280 marks. This might be contrasted with 74 Indo-Fijians in the A/A+/B+ category and 177 with a minimum of B or 280 marks.

Table 9 Percent. of 1991 Form 7 and Foundation Students at USP

	Horizontal Percentages			Vertical Percentages		
Grade	Fijian	Indo-F	Total	Fijian	Indo-F	Total
320-/A/A+	0	29	28	0	2	2
300-/B+	0	47	42	0	12	10
280-/B	50	57	54	18	25	25
260-/C+	42	46	45	29	28	29
240-/C	27	31	29	41	20	22
220-/D	5	8	7	8	6	7
200-/E	4	10	8	4	6	6
ALL	18	29	26	100	100	100

Tables 9 above indicates that none of the Fijian students with B+ or above, or with 300 or more marks, came to USP following Form 7 or Foundation. The largest proportion (65%) of the Fijian grade cohorts came from the 260-280 Seventh Form

[12]Because the grading systems used were not the same, a rough matching was done between the Form 7 mark ranges and the estimated corresponding grades at Foundation.

Examination mark range or the C+ category in Foundation.[13] For Indo-Fijians, some 70 percent of those with A/A+ or with marks above 320 did not come to USP, while just about a half of the next two tiers (B or B+ Grades) came to USP.

Thus it is clear that in total, 72% of all the Fiji students with minimum marks of 320 and minimum grades of A, and 46% of the next tier did not come to USP. This limited data indicates a massive erosion of the quality of Fiji student intake to USP from the 1991 Form 7 and Foundation cohorts.

Given that the Fiji students comprise the bulk of students at USP, and that the average standards at USP are thereby largely determined by the performances of the Fiji students, it is important for the University to come to grips with the actual extent of erosion of the quality of the intake to USP. This may be need to be done on a department by department, or school by school basis, so that the facts may assist the internal assessment procedures.

If it is found, for instance, that the quality of the student intake has been systematically declining over the last few years, USP's academic standards would be be compromised if it were to attempt to maintain or even increase its "pass rates" (as currently seems to be the case), unless it could be shown that simultaneously there were other counteracting factors which could legitimately be expected to lead to improvements in student performances.[14]

SECTION C CRITERION FOR ENTRY TO USP

One of the interesting by-products of this study of the academic performance of Fiji students at USP is that there is considerable evidence that that Aggregate Form 7 marks, are not necessarily correlated with performance in some subjects at USP.

Thus the correlation between the EC102 performance and the Form 7 Total marks is extremely weak, for both indigenous Fijians (R squared of 0.04) and Indo-Fijians (R squared of 0.00) in aggregate. Correlation between Total Form 7 marks and Mathematics (MA101) also is not particularly high for either Indo-Fijians (0.17) or indigenous Fijians (0.27).

Subject marks, however, appear to be much better predictors for Economics and Mathematics. The 1994 EC102 results regressed on Form 7 Economics marks, gave somewhat higher correlation coefficients of 0.16 for Fijians and 0.25 for Indo-Fijians, although both these probably could have been higher.[15] Similarly, the correlation between MA101 performance and the Form 7 Mathematics marks are significantly stronger for both Fijians (0.64) and Indo-Fijians (0.57).

The generally low correlation between Aggregate Form 7 marks and individual

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[13]It may be noted that 250 has become the minimum Form 7 mark for entry to the degree programmes.

[14]The personal experiences of the author (who has been teaching at USP for the last 21 years) and other colleagues, suggests that there has indeed been some erosion of the overall quality in student performance.

[15]The correlation coefficient was probably reduced by the particular mark scaling strategy adopted for the course.

subject performances at USP has to be an area of concern since the University uses the Form 7 Total Marks as the most important criterion of entry to degree studies for school leavers.

Given that USP's degrees require the passing of a minimum number of courses specifically in the subject majors and minors selected, the evidence would indicate that performance in the corresponding subject area at Form 7 would be a more useful indicator of likely performance in the same subject at USP.

This issue has surfaced periodically ever since the University began and is unlikely to disappear in the future. If the University's method of selecting students for USP programmes is significantly flawed, then this surely undermines the University's functions at its very heart.

There seems to be an urgent need for the University to examine this issue at greater depth across all subject areas, and over time, with a view to improving the criteria for entry to USP.

SECTION D CONCLUSIONS

Academic performance of students rests on a large number of factors such as the quality of students, their study environments, their individual motivation and efforts, the quality of the teaching staff and their teaching performance, and the quality of support services at the University. This paper has limited itself to merely one factor, the quality of students (and how this quality might be measured).

The evidence in this preliminary study indicates that academic performances of the students of most countries other than Fiji, have been significantly below the University average. For nearly all of them (except Western Samoa) the performances would also seem to be relatively worsening over time, in comparison to the trend in the University average (which is largely determined by the Fiji average).

The evidence for the five countries (Kiribati, Solomons, Tonga, Vanuatu and W.Samoa) whose students sit the PSSC at the sixth form level, would support a preliminary conclusion that the relatively weaker performance of these countries may be linked to the quality of the student intakes from these countries. For all five countries, the bulk of their better quality students do not come to USP, hence the distribution of their student body at USP is generally biased towards the weaker students, hence resulting in relatively weaker academic performances.

It is interesting that for one of these countries (W.Samoa) there has been a significant improvement in the quality of the better students coming to USP. There is also evidence that the overall academic performance of W.Samoan students, has also been steadily improving, to be above average in some subject areas by 1994. The two may be related.

The relatively weaker national average academic performances of most countries has to be a matter of some concern to USP. The situation for these countries may be worse than is indicated above, if the University averages (which are largely dependent on the grades of the numerically superior Fiji students)

are not absolute indicators of actual academic performances and standards at USP. The latter may be so, if the equally serious erosion of the better quality Fiji students at USP is also resulting in an erosion of the real academic standards at USP, not indicated by the absolute levels and trends in pass rates and grade distributions.

It is inevitable that with the largest proportions of the best students from these countries not coming to USP, the academic performances of those who do come, are less likely to be outstanding. Not only are their own abilities likely to be lower, but the absence of good quality students (from their own social groups) who could act as role models for ideal study patterns, could also be a contributory negative factor in their academic performance.

Ultimately, however, without good quality students, no university, let alone USP, can maintain international academic standards. It is essential, therefore, that regional member governments and donors become aware of the immensity of the problem being created at USP, because of the direct and indirect consequences of their scholarship policies.

The drain of good students from the region may be explained by a number of factors. The primary explanation is that the scholarships offered by donors for study in donor countries are financially far more valuable, and socially far more attractive, than the scholarships for study at USP. This also applies to scholarships offered by regional governments, for study in the metropolitan countries vis a vis study at USP.

Secondly, for both scholarship funded and privately funded students, a metropolitan qualification would tend to facilitate appointment to desirable positions, international mobility and future emigration to the metropolitan country concerned. For three of the countries above, Fiji, W.Samoa and Tonga, this has to be an important factor, given the pattern of high rates of emigration associated with them. It is also important for those countries, such as the Cooks, Niue and Tokelau, whose citizens have relatively free access to NZ.

Another factor, which to some extent is unavoidable, is that many of the "desirable" marketable qualifications (in engineering, medicine, architecture, specialised sciences, etc.,) require study in courses not available at USP. These courses inevitably attract away the best of the students from the Pacific, since the entry requirements of metropolitan universities will weed out the average or weak students. The drain due to this factor will no doubt continue as long as these courses are not available at USP.

While donors have recently agreed not to awards scholarships for study in their countries for courses available at USP, there are still numbers of students ending up in such courses, after initially enrolling in courses not available at USP. It is also unfortunately the case that many Regional Member Governments, for a variety of reasons, still fund selected students for study in metropolitan countries, not necessarily on academic grounds.

To some extent, the situation may be ameliorated partly because the introduction of full fees for private foreign students in Australia and NZ may well discourage private students from the region. The slight upturn in average academic performance at USP in 1994, may possibly be partly explained by this factor. With the overall numbers of scholarships not likely to rise in the near future, the rising numbers of secondary students qualifying for University study, will inevitably tend to improve the quality of the intake into USP. This will

occur only in the long run: the short term problems still need to be addressed.

The limited evidence in this paper (and in other studies over the years) also indicates that the selection criteria for entry to USP, based on aggregate marks in secondary school leaving examinations, may not be appropriate indicators of likely performance in some disciplines at USP.

SECTION F RECOMMENDATIONS

1. The University establish a special unit (possible sites: CELT, PDO) appropriately staffed and resourced, which will

   (a) systematically monitor all relevant aspects of academic performance in all the credit courses of the University (campus, extension, summer schools, etc.)

   (b) focus especially on subject areas, nationality, gender, and other parameters of interest (marital status, residential status, work experience, etc.).

   (c) Publish the results of such monitoring as part of the normal reporting by the University,

   (d) Assist the University to identify problems areas which may be addressed by the relevant University sections.

   (e) continuously monitor the quality of students coming to USP and those studying in other non-regional institutions (and other related aspects).

2. The University establish a project, appropriately funded, which will examine

   (a) the relevance and efficiency (in terms of being reasonably good predictors of success at USP) of current entry requirements based on national secondary school performance indicators.

   (b) whether there is broad evidence of significantly higher correlation between secondary school subject marks and USP performance in corresponding subject areas, and if there is,

   (c) whether a more flexible entry requirement (e.g. acceptable passes in two relevant or related areas) would be more useful in selecting the appropriate students.

3. The University take further steps to improve academic performance by students at USP. These could include:

   (a) Improving the quality of teaching staff through improvements in the terms and conditions of academic staff in order to attract better quality staff

   (b) Improving the quality of teaching and learning, through the greater support of CELT activities

   (c) Improving the quality of studying environments at USP (such as Library space)

   (d) Greater School support for mechanisms (such as Student Advisory Groups) to enable the early identification of, and remedial action

for, students having problems

(e) Strengthening existing systems of incentives (such as academic prizes)[16], and creating new ones (such as the offering of Degrees With Distinction) to encourage students to better academic performance.

4. The University discuss with Governments

(a) the need for a uniform regional examination(s) which may be more suitable as a standard for entry to courses at USP,

(b) and whether such examination(s) could be conducted through an appropriate body (such as the SPBEA or some special unit established at USP, such as in IOE), funded by Member Governments.

5. The University emphasise to Member Governments and Donors the urgent need to ensure that there are no unnecessary awards for study outside of the region, and that students be given

6. The University emphasise to Member Governments and Donors that students be given scholarships in areas most suited to their abilities and inclinations.

[16]The Planning and Development Office will soon be informing the University of a number of available academic prizes which, following a PDO initiative this year, institutions in the region have agreed to fund annually.

APPENDIX ACADEMIC PERFORMANCE ON LAUCALA CAMPUS (1990-1994)

Table 1 Percentages Obtaining At Least an A-Grade (all subjects)

	1990	1991	1992	1993	1994	Aver 90-94
All Countries	8	8	6	7	8	8
Cook Islands	2	8	5	9	9	7
Fiji	9	8	6	7	9	8
Kiribati	2	1	1	1	2	1
Marshall Islands	0	3	2	14	0	4
Nauru	0	0	0	10	0	2
Niue	0	0	0			0
Solomon Islands	7	4	5	3	4	5
Tokelau	0	0	2	0	0	0
Tonga	7	4	5	6	6	6
Tuvalu	3	2	0	0	2	1
Vanuatu	3	7	4	3	5	5
Western Samoa	4	5	4	5	5	5
Other	19	23	18	21	14	19

Table 2 National GPAs (all subjects)

	1990	1991	1992	1993	1994	Aver 90-94
All Countries	2.1	2.1	2.1	2.2	2.3	2.2
Cook Islands	2.2	2.2	2.4	2.1	2.5	2.3
Fiji	2.1	2.2	2.2	2.2	2.4	2.2
Kiribati	1.7	1.8	1.8	1.9	1.9	1.8
Marshall Islands	2.5	2.3	1.3	1.3	0.1	1.5
Nauru	1.3	1.7	2.1	2.2	2.3	1.9
Niue	1.3	2.3	2.5			2.0
Other	2.4	2.4	2.5	2.5	2.4	2.4
Solomon Islands	2.2	2.2	2.3	2.0	2.2	2.2
Tokelau	1.2	1.6	1.8	0.9	1.5	1.4
Tonga	2.2	2.0	2.0	2.1	2.2	2.1
Tuvalu	1.9	1.4	1.3	1.9	2.0	1.7
Vanuatu	2.1	2.0	1.9	2.1	2.2	2.1
Western Samoa	1.8	1.8	2.1	2.2	2.4	2.1

Table 3 Units Undertaken in Mathematics (by countries)

	1990	1991	1992	1993	1994
All Countries	2175	2135	1117	1149	1268
Cook Islands	14	10	3	5	3
Fiji	1783	1783	806	938	1072
Kiribati	29	32	30	5	8
Marshall Islands		1	4	3	2
Nauru	1				
Niue	1				
Other	60	47	26	31	21
Solomon Islands	123	85	108	85	93
Tokelau	5	3	6	1	
Tonga	74	85	65	37	26
Tuvalu	8	12	20	6	14
Vanuatu	38	20	21	17	5
Western Samoa	39	57	28	21	24

Table 4 Percentage with At Least an A Grade in Mathematics

	1990	1991	1992	1993	1994
All Countries	6	6	3	3	4
Cook Islands	0	0	0	0	0
Fiji	7	6	3	3	4
Kiribati	0	0	0	0	0
Marshall Islands		0	0	0	0
Nauru	0				
Niue	0				
Other	15	34	15	10	10
Solomon Islands	1	1	5	0	0
Tokelau	0	0	0	0	
Tonga	5	1	5	5	0
Tuvalu	0	8	0	0	0
Vanuatu	0	0	5	0	0
Western Samoa	0	0	0	0	0

Table 5 GPA in Mathematics (by countries)

	1990	1991	1992	1993	1994	ALL
All Countries	1.5	1.6	1.4	1.4	1.5	1.5
Cook Islands	1.3	1.1	0.8	1.2	0.7	1.0
Fiji	1.5	1.6	1.5	1.4	1.6	1.5
Kiribati	1.1	0.7	0.8	0.9	1.1	0.9
Marshall Islands		0.0	1.0	0.0	0.0	0.3
Nauru	0.0					0.0
Niue	0.0					0.0
Other	1.8	2.2	2.0	1.7	2.3	2.0
Solomon Islands	1.1	1.3	1.4	0.8	1.2	1.2
Tokelau	0.4	0.0	0.3	0.0		0.2
Tonga	1.7	1.3	1.4	1.6	0.8	1.4
Tuvalu	1.0	0.7	0.7	1.1	0.5	0.8
Vanuatu	1.3	0.9	0.7	0.7	0.6	0.8
Western Samoa	1.2	1.0	0.9	0.9	1.3	1.1

Table 6 Units Taken in Accounting & FM (by countries)

	1990	1991	1992	1993	1994
All Countries	1332	1379	1549	1577	1791
Cook Islands	19	7	8	13	18
Fiji	1128	1244	1398	1445	1656
Kiribati	27	24	36	12	9
Marshall Islands			3		
Nauru	4	2		2	
Other	15	9	7	13	17
Solomon Islands	42	35	58	38	29
Tokelau		2	2		
Tonga	51	31	22	30	27
Tuvalu	3	4	4	7	8
Vanuatu	15	8	5	6	11
Western Samoa	28	13	6	11	16

Table 7 Perc. with At Least an A Grade in Acc.&FM (by countries)

	1990	1991	1992	1993	1994	ALL
All Countries	7	7	5	3	5	6
Cook Islands	0	0	0	0	6	1
Fiji	8	8	5	4	6	6
Kiribati	0	0	0	0	0	0
Marshall Islands			0			0
Nauru	0	0		0		0
Other	13	22	29	0	6	14
Solomon Islands	5	0	3	0	0	2
Tokelau		0	0			0
Tonga	0	3	9	0	0	2
Tuvalu	0	0	0	0	0	0
Vanuatu	0	0	0	0	0	0
Western Samoa	0	0	0	9	6	3

Table 8 Perc. with At Least a B Grade in Acc&FM (by countries)

	1990	1991	1992	1993	1994	ALL
All Countries	29	33	21	20	20	24
Cook Islands	11	14	0	0	17	8
Fiji	30	35	22	21	20	26
Kiribati	0	4	0	0	0	1
Marshall Islands			0			0
Nauru	0	0		0		0
Other	33	33	43	8	24	28
Solomon Islands	24	14	21	3	3	13
Tokelau		0	0			0
Tonga	31	13	14	3	11	14
Tuvalu	33	25	25	14	0	20
Vanuatu	40	13	0	17	0	14
Western Samoa	7	23	17	18	13	16

Table 9 GPA in Acc & FM (by Countries)

	1990	1991	1992	1993	1994	ALL
All Countries	2.0	2.2	2.0	2.0	2.1	2.1
Cook Islands	1.6	1.7	1.4	1.3	2.3	1.7
Fiji	2.0	2.3	2.0	2.0	2.1	2.1
Kiribati	1.0	1.5	1.2	1.4	1.1	1.2
Marshall Islands			0.3			0.3
Nauru	0.8	2.5		1.3		1.5
Other	1.8	1.7	2.3	1.4	1.8	1.8
Solomon Islands	1.9	2.0	2.0	1.2	1.4	1.7
Tokelau		0.0	1.0			0.5
Tonga	2.0	1.7	2.0	1.4	1.8	1.8
Tuvalu	1.8	1.0	1.5	2.2	2.4	1.8
Vanuatu	2.2	1.9	2.0	1.3	0.5	1.6
Western Samoa	1.6	1.6	1.3	1.9	2.1	1.7

Table 10 Units Taken in Chemistry (by countries)

	1990	1991	1992	1993	1994
All Countries	1018	852	619	754	904
Cook Islands	1	3	2		1
Fiji	855	690	410	599	742
Kiribati	8	10	4	3	5
Marshall Islands			3		
Niue	2				
Other	12	9	15	16	8
Solomon Islands	75	64	110	95	103
Tokelau	2		4		
Tonga	32	39	35	25	20
Tuvalu	3	2	9	2	8
Vanuatu	14	11	18	11	5
Western Samoa	14	24	9	3	12

Table 11 Perc. With At Least an A Grade in Chemistry

	1990	1991	1992	1993	1994	ALL
All Countries	10	10	12	14	14	12
Cook Islands	0	0	0		0	0
Fiji	10	11	14	16	16	13
Kiribati	0	10	0	0	0	2
Marshall Islands			0			0
Niue	0					0
Other	25	33	47	31	25	32
Solomon Islands	7	3	7	4	3	5
Tokelau	0		0			0
Tonga	6	3	3	12	0	5
Tuvalu	0	0	0	0	13	3
Vanuatu	0	0	6	9	20	7
Western Samoa	0	0	0	0	0	0

Table 12 Perc. With At Least a B Grade in Chemistry

	1990	1991	1992	1993	1994	ALL
All Countries	23	27	37	42	42	34
Cook Islands	100	0	50		0	38
Fiji	25	29	39	45	46	37
Kiribati	0	10	50	67	0	25
Marshall Islands			0			0
Niue	0					0
Other	33	56	60	50	38	47
Solomon Islands	17	20	35	29	26	26
Tokelau	0		50			25
Tonga	22	21	17	16	0	15
Tuvalu	0	0	0	0	38	8
Vanuatu	0	27	33	18	80	32
Western Samoa	7	4	11	0	25	9

Table 13 Percentage Passing in Chemistry (by countries)

	1990	1991	1992	1993	1994	Aver 90-94
All Countries	53	59	74	76	78	68
Cook Islands	100	0	100		100	75
Fiji	55	61	75	77	80	70
Kiribati	38	50	50	67	60	53
Marshall Islands			67			67
Niue	0					0
Other	42	67	87	63	38	59
Solomon Islands	51	53	77	78	69	66
Tokelau	0		75			38
Tonga	56	59	51	72	75	63
Tuvalu	33	0	22	0	75	26
Vanuatu	29	55	67	82	100	66
Western Samoa	29	29	78	33	75	49

Table 14 GPA in Chemistry (by countries)

	1990	1991	1992	1993	1994	ALL
All Countries	1.7	1.8	2.2	2.4	2.4	2.1
Cook Islands	3.0	0.0	2.8		2.0	1.9
Fiji	1.8	1.9	2.3	2.5	2.5	2.2
Kiribati	1.4	1.4	1.9	2.2	1.5	1.7
Marshall Islands			1.3			1.3
Niue	1.0					1.0
Other	1.5	2.3	3.2	2.4	1.7	2.2
Solomon Islands	1.5	1.6	2.3	2.2	2.0	1.9
Tokelau	0.0		2.4			1.2
Tonga	1.6	1.7	1.5	2.0	1.7	1.7
Tuvalu	1.0	0.0	0.7	0.5	2.1	0.9
Vanuatu	1.0	1.5	2.1	2.1	3.2	2.0
Western Samoa	0.8	0.9	1.9	1.0	2.1	1.3

Table 15 Units Taken in Education (by countries)

	1990	1991	1992	1993	1994
All Countries	635	779	526	569	739
Cook Islands	12	9	6	6	1
Fiji	445	591	388	425	557
Kiribati	14	27	21	14	20
Marshall Islands		1	2	2	
Nauru	1			1	
Niue	1	1			
Other	30	24	17	9	12
Solomon Islands	35	33	23	29	57
Tokelau	1		1		
Tonga	40	40	26	25	23
Tuvalu	3	5	1	6	3
Vanuatu	26	7	7	8	13
Western Samoa	27	41	34	44	53

Table 16 Perc. With At Least an A Grade in Education

	1990	1991	1992	1993	1994	ALL
All Countries	14	14	6	8	10	10
Cook Islands	0	11	0	0	0	2
Fiji	15	14	6	6	11	10
Kiribati	7	0	0	14	0	4
Marshall Islands		0	0	0		0
Nauru	0			0		0
Niue	0	0				0
Other	43	46	12	33	8	29
Solomon Islands	6	15	0	7	4	6
Tokelau	0		0			0
Tonga	20	10	15	32	22	20
Tuvalu	0	20	0	0	0	4
Vanuatu	4	0	0	0	15	4
Western Samoa	7	5	3	9	8	6

Table 17 Perc. With At Least a B Grade in Education

	1990	1991	1992	1993	1994	ALL
All Countries	62	59	55	56	59	58
Cook Islands	42	78	50	67	0	47
Fiji	61	60	56	57	60	59
Kiribati	43	37	33	21	35	34
Marshall Islands		100	0	0		33
Nauru	100			0		50
Niue	100	100				100
Other	77	63	76	56	83	71
Solomon Islands	69	73	43	45	44	55
Tokelau	0		0			0
Tonga	63	73	62	64	74	67
Tuvalu	33	80	100	50	100	73
Vanuatu	69	0	0	25	31	25
Western Samoa	63	44	56	66	74	60

Table 18 Percentage Passing in Education (by countries)

	1990	1991	1992	1993	1994	Aver. 90-94
All Countries	92	92	91	93	92	92
Cook Islands	92	89	83	100	100	93
Fiji	92	92	92	92	92	92
Kiribati	93	100	95	93	95	95
Marshall Islands		100	50	50		67
Nauru	100			100		100
Niue	100	100			100	
Other	93	92	100	56	92	86
Solomon Islands	97	97	96	93	84	93
Tokelau	100		0		50	
Tonga	98	100	81	96	96	94
Tuvalu	67	100	100	100	100	93
Vanuatu	96	86	86	100	85	90
Western Samoa	85	83	91	98	94	90

Table 19 GPA in Education

	1990	1991	1992	1993	1994	ALL
All Countries	2.8	2.8	2.6	2.7	2.7	2.7
Cook Islands	2.5	2.8	2.4	3.0	2.0	2.5
Fiji	2.8	2.8	2.7	2.7	2.8	2.8
Kiribati	2.5	2.6	2.5	2.4	2.5	2.5
Marshall Islands		3.0	1.3	1.0		1.8
Nauru	3.0			2.0		2.5
Niue	3.5	3.5				3.5
Other	3.2	3.1	3.1	2.3	2.8	2.9
Solomon Islands	2.8	3.0	2.6	2.6	2.4	2.7
Tokelau	2.5		1.0			1.8
Tonga	2.9	3.1	2.8	3.0	3.2	3.0
Tuvalu	1.7	3.1	3.0	2.7	3.3	2.8
Vanuatu	2.9	1.6	1.7	2.5	2.3	2.2
Western Samoa	2.6	2. 4	2.7	2.9	2.9	2.7

Table 20 Numbers of 1991 Form 7 and Foundation Students at USP

Total*	Fijian		Indo-F		Others		Total	
Mk/Grade	Pass	@USP	Pass	@USP	Pass	@USP	Pass	@USP
320-/A/A+	1	0	14	4	3	1	18	5
300-/B+	1	0	60	28	12	3	73	31
280-/B	18	9	103	59	19	7	140	75
260-/C+	33	14	143	66	20	8	196	88
240-/C	73	20	149	46	13	2	235	68
220-/D	87	4	189	15	19	1	295	20
200-/E	54	2	151	15	5	0	210	17
ALL	267	49	809	233	91	22	1167	304

* Total Marks out of 400.